

IN THE CLAIMS:

1. (Currently Amended) A method for butt welding metal sheets (1, 2), preferably strips of metal sheet or steel sheet billets of differing thickness, the method comprising:

providing by relative motion between a laser beam (11) or electron beam and said metal sheets (1, 2) along the contact line between said metal sheets (1, 2) or the weld seam to be prepared with tension rollers (4, 5, 10) arranged in pairs above and below said metal sheets (1, 2) at spaced location from one another and next to said weld seam along said contact line of said metal sheets (1, 2) or said weld seam to be prepared, wherein said tension rollers (10) include tension rollers arranged above said metal sheets (1, 2) that are movable in height and/or roll on said metal sheets (1, 2) in a spring-loaded manner, characterized in that and wherein said tension rollers (4, 5) include tension rollers arranged below said metal sheets (1, 2) including a tension roller on one side of the said weld seam that is are adjusted in height at least on one side of said weld seam.

2. (Currently Amended) A method in accordance with claim 1, characterized in that wherein said tension rollers (4, 5) are adjusted in height as a function of the thickness and/or the necessary height position of said corresponding metal sheet (1, 2).

3. (Currently Amended) A method in accordance with claim 1 or 2, characterized in that wherein the height of one of said tension rollers (4) is changed and the height of another tension roller (5) is fixed during the ongoing welding operation.

4. (Currently Amended) A device for butt welding said metal sheets (1, 2), preferably metal sheet strips or steel sheet billets of differing thickness for carrying out the welding method in accordance with the above claim, the device comprising:

wherein said

5           a laser beam or electron beam; and

tension rollers (4, 5, 10) are arranged in pairs at spaced locations from one another next to said weld seam above and below said metal sheets (1, 2) allowing relative motion between said laser beam or said electron beam and the metal sheets along a contact line between the metal sheets or a weld seam to be prepared, and said tension rollers (10) including tension rollers arranged above said metal sheets (1, 2) that are movable in height and/or roll on said metal sheets (1, 2) in a spring-loaded manner, characterized in that and including at least one of said tension rollers (4) arranged below said metal sheets (1, 2) that is arranged on a bearing (8) that is adjustable in height on a vertical guide rail.

10           5. (New) A method for butt welding metal sheets, the method comprising:

providing a laser beam or electron beam;

providing upper tension rollers and supported above the metal sheets so as to be movable in height and/or roll on the metal sheets in a spring-loaded manner;

5           providing lower tension rollers arranged below the metal sheets with one of said lower tension rollers being on one side of the weld seam and being adjustably mounted to be adjusted in height.

6. (New) A method in accordance with claim 5, further comprising:

adjusting the height of said one of said lower tension rollers adjustably mounted on one side of the weld seam; and

subsequent to said step of adjusting the height, fixing a height position of said one of said lower tension rollers adjustably mounted on one side of the weld seam for but welding the sheets.

7. (New) A method in accordance with claim 6, wherein said step of adjusting the height includes adjusting the height of said one of said lower tension rollers adjustably mounted on one side of the weld seam as a function of the thickness and/or the necessary height position of said corresponding metal sheet which said one of said lower tension rollers adjustably mounted on one side of the weld seam is in contact.

8. (Currently Amended) A method in accordance with claim 7, wherein the height of said one of said lower tension rollers adjustably mounted on one side of the weld seam is adjusted while maintaining fixed the height position of another of said lower tension rollers.